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Wechsler Memory Scale IV (WMS-IV)

Availability:	**Please visit this website for more information about the instrument: Wechsler Memory Scale IV** **Author:** David Wechsler
Classification:	**Supplemental:** Cerebral Palsy (CP) and Mitochondrial Disease (Mito)
Short Description of Instrument:	The Wechsler Memory Scale is a neuropsychological test designed to measure different memory functions in a person. The WMS-IV also incorporates an optional cognitive exam (Brief Cognitive Status Exam) to assess global cognitive functioning in people with suspected memory deficits or those who have been diagnosed with various neural, psychiatric and/or developmental disorders. This may include forms of dementia and some forms of learning disabilities. The test is normed for use in individuals aged 16-90.11 years. The test provides standard score index scores for auditory memory, visual memory, and visual working memory and provides assessment of both immediate recall and delayed recall. Additional optional subtests also provide assessment of process items like performance on recognition trials allowing assessment of the contribution of encoding vs. retrieval problems, with scaled scores and cumulative percentage scores provided.
Rationale/ Justification	Mitochondrial Disease Specific Rationale: While this test has not been used specifically researched in populations with mitochondrial disease, the components of the test are comprehensive and provide assessment of a variety of memory related functions that may potentially be affected in mitochondrial disease. The measure includes a brief cognitive status (orientation) examination in addition to measures of attention/working memory, and verbal and nonverbal memory. Subtests like the Logical Memory (narrative memory) and Designs (visual/spatial memory) are very similar in format to subtests on the NEPSY-II, allowing these subtests to be used in longitudinal studies. This version of the battery has been modified to minimize fine motor demands, to reduce administration time potentially limiting fatigue effects, and to modify test materials to limit impact of visual impairment. The test is co-normed with the WAIS-IV and the CVLT-II, allowing ease of comparison across longer clinical test batteries. The factor structure has been demonstrated to be robust in both control and clinically depressed populations (Pauls et al., 2013). Mitochondrial Disease Advantages/Limitations Working memory and narrative memory subtest performance differentiates individuals with early onset vs. late onset Friedreich Ataxia from one another (Nieto et al., 2013). Specific studies are otherwise not available.

References	WMS-III Validation Study in Population with Intractable Temporal Lobe Epilepsy Epilepsy Research. Nieto A, Correi, ., de Nobrega E, Monton F, Barroso J. Cognition in late-onset Friedreich Ataxia. Cerebellum. 2013;12:504–512. Pauls F, Petermann F, Lepach AC. Memory assessment and depression: testing for factor structure and measurement invariance of the Wechsler Memory Scale-Fourth Edition across a clinical and matched control sample. J Clin Exp Neuropsychol. 2013;35(7):702–717.